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The Economic Impact of Medicaid Spending in Arkansas

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THE ECONOMIC IMPACT OF MEDICAID SPENDING IN ARKANSAS

Produced for the Mental Health Council of Arkansas

In Partnership with:

The Arkansas Hospital Association

Arkansas Children's Hospital

Developmental Disabilities Provider Association

Arkansas Advocates for Children and Families

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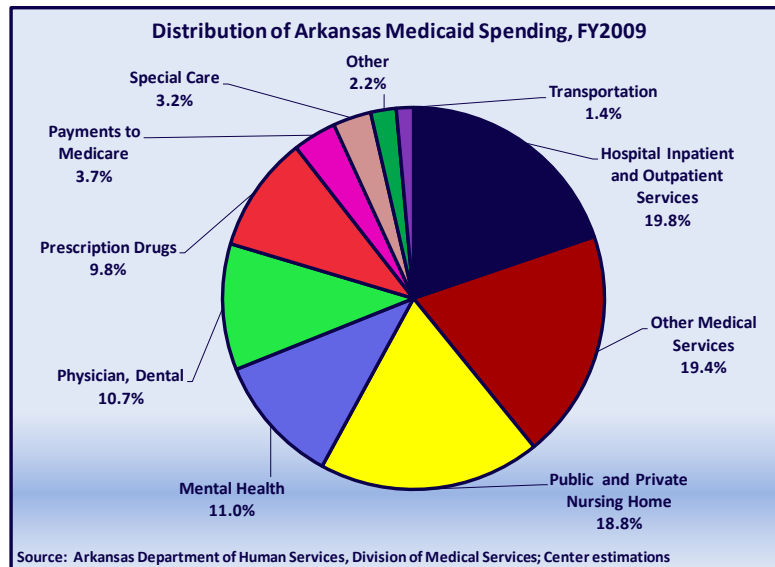
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EXECUTIVE SUMMARY

Arkansas Medicaid is a joint federal and state program that provides necessary medical services to needy and low-income persons that is administered through the Arkansas Division of Medical Services at the Arkansas Department of Human Services. The Medicaid program is designed to provide the baseline health outcomes that are necessary for the state's economy to function. The expenditures that are made through the Arkansas Medicaid program significantly affect the Arkansas economy. This report details the economic impacts of the direct expenditures of the Medicaid program on the Arkansas economy. Some highlights follow:

- The Arkansas population was almost 2.9 million in 2009, ranking the state 32nd among the 50 states and the District of Columbia.
- In 2000, Arkansas per capita personal income was 74.5 percent of the United States average and the state ranked 49th in terms of average income. By 2009, Arkansas per capita personal income was 81.6 percent of the United States average and the state's ranking had improved to 46th.
- Arkansas real state gross domestic product was \$79.2 billion in 2008, ranking the state 34th in terms of total economic output.
- On a per capita basis, Arkansas ranks much more poorly in terms of economic output with \$27,753 worth of goods and services produced per state resident in 2008. This level placed the state in 49th position among its peers.
- Similar trends appear in the production of health care and social assistance in Arkansas. The industry GDP was \$6.0 billion in 2008, ranking the state 32nd, but on a per capita basis, health care and social assistance GDP was \$2,105, ranking the state 44th in 2008.
- In Arkansas, Medicaid expenditures increased from \$1.6 billion in fiscal year 2000 to \$3.4 billion in fiscal year 2008, an increase of 112 percent. The share of state GDP devoted to Medicaid spending increased from 2.4 percent to 3.5 percent during the same time period.
- Arkansas Medicaid spending per capita increased from \$604 in fiscal year 2000 to \$1,196 in fiscal year 2008.
- In 2008, the state had the 15th highest Medicaid expenditures per capita among all states and the District of Columbia.
- However, the latest data available indicated that the Arkansas Medicaid program has among the lowest expenditures per enrollee at \$3,676 in 2006.
- About 80 percent of Arkansas Medicaid spending in 2009 was in the categories of hospital inpatient and outpatient services, other medical services, public and private nursing homes, mental health, and physician and dental services.



- In 2009, total economic activity of \$5.9 billion was generated as a result of direct Medicaid spending of \$3.7 billion in Arkansas.
- Accordingly, 70,277 full-time jobs in the state of Arkansas were attributable to the Medicaid program in 2009. This equates to 6.0 percent of all employment in Arkansas in 2009.
- Total employees compensation associated with these jobs was estimated to be \$2.4 billion. The estimate included wages and salary, all benefits (health, retirement, etc), and employer paid payroll taxes such as the employer portion of social security and unemployment taxes.
- The average multiplier or the ratio of total to direct economic impact was estimated to be 1.60 for output, 1.45 for employment, and 1.34 for employee compensation.

Category	Direct Economic Impact	Indirect Economic Impact	Induced Economic Impact	Total Economic Output Impact	Average Multiplier
Output	\$3,716,306,944	\$777,214,784	\$1,455,329,688	\$5,948,850,688	1.60
Employment	48,505	37,785	13,986	70,277	1.45
Employee Compensation	\$1,801,595,954	\$219,728,985	\$394,390,799	\$2,415,715,763	1.34

Source: Arkansas Department of Human Services; IMPLAN; Center for Business and Economic Research estimates

- The Medicaid program is financed by taxpayers, but the expenditures associated with Medicaid generate additional tax revenues that are then collected by state and local governments. According to the IMPLAN model, the Medicaid Program added \$231.8 million to the state and local governments' revenues through employee compensation taxes, indirect business taxes, sales and use taxes, and business taxes.
- The federal government matched each dollar spent by the Arkansas state government on the Medicaid program with \$2.94 in fiscal year 2009.
- The return on the Medicaid program spending by the state government to the Arkansas economy in 2009 is estimated as the ratio of state spending of \$943 million and the total impact of Medicaid expenditures estimated to be \$5.9 billion. The resulting multiplier is equal to 6.31. Thus, each dollar spent by the state government on the Medicaid program in 2009 resulted in an estimated \$6.31 of total economic output impact for the state economy.
- In addition to the estimated impacts, the Medicaid program also provides non-monetary impacts for the state of Arkansas, such as improved health outcomes for its participants. These effects are not included in the total economic impact numbers in this report.

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INTRODUCTION

Arkansas Medicaid is a joint federal and state program that provides necessary medical services to needy and low-income persons. Good health is important for people to enjoy a reasonable standard of living and is vital to the proper functioning of the state's economy, as well. Those who cannot afford to pay for medical care are able to get the care they need and stay healthy via the Arkansas Medicaid program. The Arkansas Department of Human Services administers the Medicaid program through the Arkansas Division of Medical Services. Services provided by the Arkansas Medicaid program include those that are federally mandated¹ and those that are optional² for the state.

The Center for Business and Economic Research conducted a study on the economic impact of the Medicaid program in Arkansas in 2002. That study showed that in the year 2000, for each dollar that Arkansas spent on Medicaid, there was a total multiplier effect (including federal matching dollars) of \$4.45. From 2000 to 2010 there have been several important structural changes in the Arkansas economy. First, the portion of state GDP directly attributable to the health care sector has increased from 6.9 to 7.8 percent. Second, the mix of employment in Arkansas has changed, as the manufacturing sector has shed jobs and the service sector has become a larger employer. Third, the Great Recession has affected all levels of the economy in Arkansas, and with increasing unemployment rates, more and more Arkansas citizens find themselves in need of assistance with basic medical expenses. This report provides updated and improved data and methodology to show the current economic impact of Medicaid on the state of Arkansas.

¹ The federally mandated services are: child health services, family planning services, federally qualified health centers, home health services, inpatient hospital services, laboratory and x-ray services, nurse-midwife services, nurse practitioner services, nursing facility services, outpatient hospital services, physician services, and rural health clinic services.

² The optional services are: ambulatory surgical center services, audiological services for those younger than 21, certified registered nurse anesthetist services, child health management services, chiropractic services, dental services for those younger than 21, developmental day treatment clinic services for preschoolers to 17-year-olds, domiciliary care services, durable medical equipment, emergency services, ElderChoices home and community based nursing facilities, hospice services, hyperalimentation services, inpatient psychiatric services for those younger than 21, inpatient rehabilitative hospital services, intermediate care facility services for the mentally retarded, long term care, medical supplies, nursing facility services for those younger than 21, occupational, physical, and speech therapy for those younger than 21, organ transplants, personal care services, podiatrist services, portable x-ray services, private duty nursing services for ventilator-dependent and high-technology non-ventilator dependent, prescription drugs, prosthetics, psychology services for those younger than 21, rehabilitative services for persons with mental illness, rehabilitative services for persons with physical disabilities, targeted case management, transportation services, ventilator equipment, and visual services.

The study is organized as follows. First, an economic overview for the state of Arkansas is provided. Discussion of the state population, personal income, state gross domestic product, and the health care and social assistance industry is offered. Next, Medicaid expenditures data are presented. The methodology used for the study's economic impact analysis is discussed after that. Then the economic output and employment impacts of Medicaid expenditures are estimated using the IMPLAN input-output model. Using those estimates the return on state investment in Medicaid is discussed. Appendix A and Appendix B include more comprehensive data that underlie the analysis in the report.

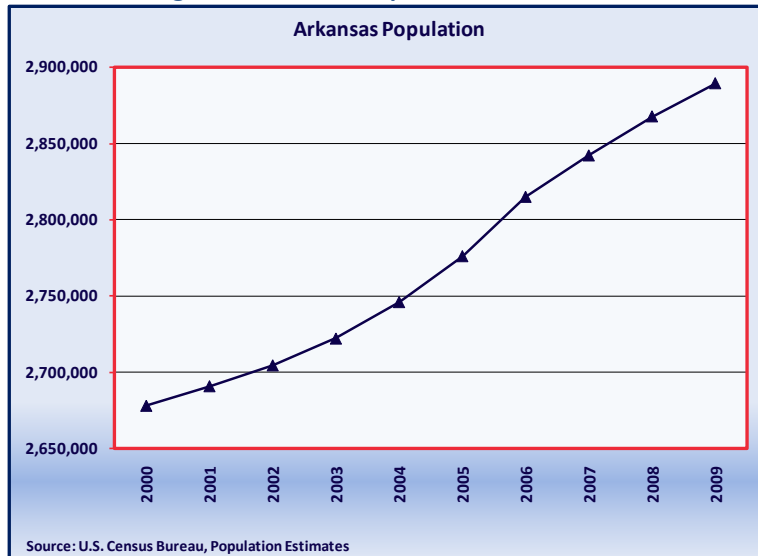
ARKANSAS ECONOMIC OVERVIEW

In order to demonstrate the importance of Medicaid spending on the Arkansas economy, a brief state economic overview is presented below. Arkansas ranks below average among other states and the District of Columbia on population, total personal income, state gross domestic product (GDP), and health care and social assistance production. The Arkansas rankings in 2008 were 32nd, 33rd, 34th, and 32nd in these categories, respectively. When looking at state personal income, state GDP, and health care and social assistance industry production in per capita terms, the picture becomes gloomier. In 2008, Arkansas ranked 47th, 49th, and 44th in personal income per capita, real GDP per capita, and real production per capita of health care and social assistance industry, respectively. Production per capita in the health care industry was 45th in 2007 and most likely declined in 2008. Under most metrics, the growth of the Arkansas economy has been slower than national growth in per capita terms. The state's ranking is near the bottom and continues to decline for state GDP per capita and production of the health care and social assistance industry per capita. The following sections detail these statistics further.

Population

The Arkansas population was 2,889,450 in 2009, according to the United States Census Bureau intercensal population estimates (Figure 1). The state's population increased by 211,162 people (7.9 percent) since 2000, while the overall U.S. population increased by 8.8 percent during the same time period. Since surpassing Kansas in 2003, Arkansas has ranked 32nd in population among the 50 states and the District of Columbia. In 2009, the population of Arkansas represented 0.9 percent of the total United States population.

Figure 1: Arkansas Population, 2000 - 2009

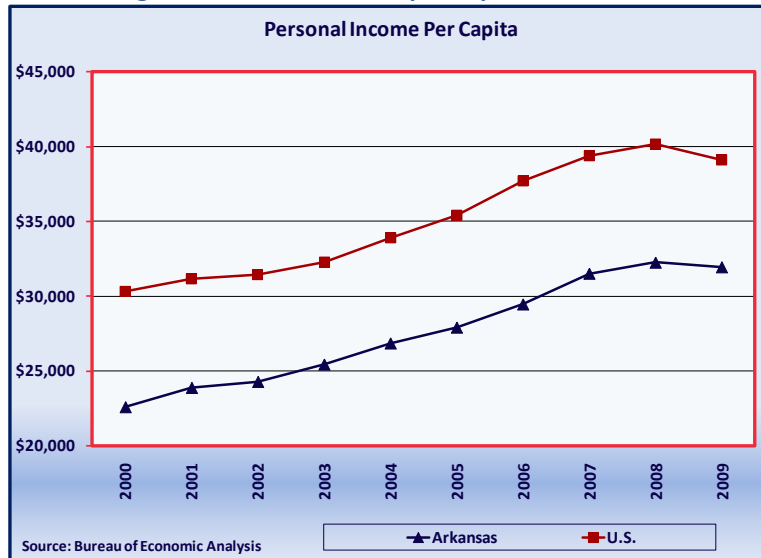


Personal Income

Personal income is an important indicator of wealth in a region. The Bureau of Economic Analysis (BEA), an agency within the U.S. Department of Commerce, defines state personal income as income that is received by, or on behalf of, persons who live in the state. It is calculated as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income, rental income, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance. According to the BEA, Arkansas total personal income was about \$92.3 billion in 2009 (in current dollars). From 2000 to 2009, Arkansas total personal income increased by 52.7 percent, while U.S. total personal income increased by 40.5 percent. As a result, the Arkansas ranking among other states and the District of Columbia increased from 34th to 33rd during this time period.

Per capita personal income is the best measure of the average welfare of a state's population and allows easy comparison to national prosperity. The Arkansas per capita personal income amount was \$31,946 in 2009. The state's income per capita has gradually increased in comparison to national levels in recent years (Figure 2). In 2000, Arkansas per capita income was 74.5 percent of the United States measure and by 2009, it was 81.6 percent. However, Arkansas remains among the bottom states in per capita terms. The state ranked 46th in 2009, an increase from 47th in 2008 and 49th in 2000.

Figure 2: Personal Income per Capita, 2000 - 2009



State Gross Domestic Product

State gross domestic product (GDP) is a measure of each state's production and provides information about overall strength of an economy. The measure is derived as the sum of the gross domestic product originating in all industries in the state and is available from the BEA. Arkansas ranked 34th among 50 states and the District of Columbia with \$79.2 billion in state GDP in 2008 (the most recent data available, in chained 2000 dollars to adjust for inflation). Although Arkansas GDP grew steadily for the past few years, the state's 2008 ranking was the same as the state's ranking in 2000.

To compare Arkansas' position with the top five and bottom five states in terms of real GDP, Table 1 is presented. California had the highest GDP from 2000 to 2008. Overall, top 5 states did not change during this time period and also included New York, Texas, Florida, and Illinois. The bottom five states remained the same as well: Alaska, Montana, North Dakota, Wyoming, and Vermont. Arkansas ranking indicates that it is below average with respect to the other states. In fact, Arkansas state GDP was only 35.1 percent of the average state GDP in the U.S. in 2008.

Table 1: State Gross Domestic Product, 2000 and 2008

State	2000		2008	
	Real GDP, million \$	Ranking	Real GDP, million \$	Ranking
California	\$1,287,145	1	\$1,546,125	1
New York	\$777,157	2	\$964,755	2
Texas	\$727,233	3	\$925,505	3
Florida	\$471,316	4	\$603,462	4
Illinois	\$464,194	5	\$516,144	5
Arkansas	\$66,801	34	\$79,245	34
Alaska	\$27,034	46	\$29,950	47
Montana	\$21,366	48	\$27,253	48
North Dakota	\$17,752	50	\$24,269	49
Wyoming	\$17,331	51	\$21,752	50
Vermont	\$17,782	49	\$21,697	51

Source: Bureau of Economic Analysis, U.S. Department of Commerce; Center estimations

Because each state's population varies and directly affects GDP, per capita GDP (calculated as the state's GDP divided by its population) can be a more useful measure of a state's prosperity. Using this measure, Arkansas falls to 48th place in 2000 and to 49th place in 2008 (see Table 2; a more detailed Table 17 is provided in the Appendix A and includes data for all 50 states and the District of Columbia for 2000, 2004, and 2008). Only West Virginia and Mississippi had smaller real GDP per capita than Arkansas in 2008.

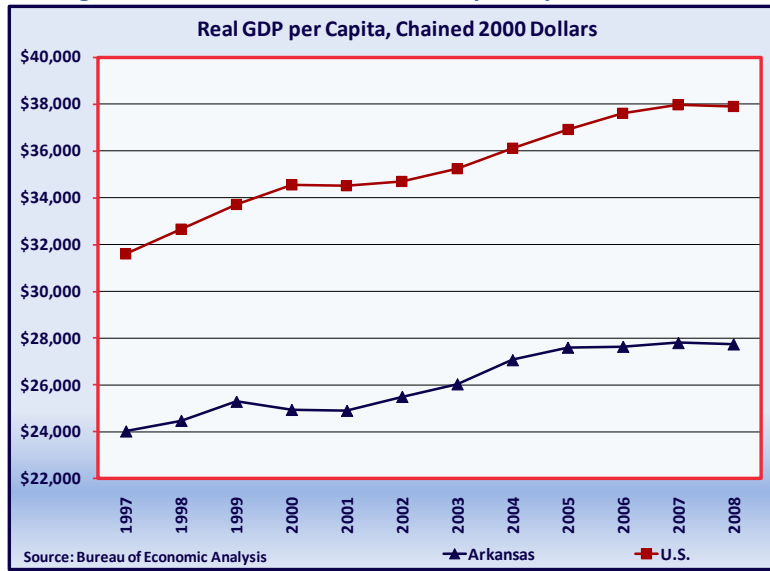
Table 2: State Gross Domestic Product per Capita, 2000 and 2008

State	2000		2008	
	Real GDP per Capita	Ranking	Real GDP per Capita	Ranking
District of Columbia	\$102,670	1	\$126,407	1
Delaware	\$52,737	2	\$56,401	2
Connecticut	\$47,025	3	\$50,758	3
New York	\$40,906	6	\$49,499	4
Massachusetts	\$43,213	4	\$48,088	5
South Carolina	\$27,965	40	\$28,364	47
Montana	\$23,653	49	\$28,170	48
Arkansas	\$24,942	48	\$27,753	49
West Virginia	\$22,954	50	\$25,533	50
Mississippi	\$22,563	51	\$24,403	51

Source: Bureau of Economic Analysis, U.S. Department of Commerce; Center estimations

The decline in ranking occurred despite the absolute increase in Arkansas GDP per capita during this time period. Figure 3 shows how real GDP per capita in Arkansas and nationwide has been steadily increasing since 1997, decreasing slightly during recessions. Arkansas' economic activity is connected with the United States' macroeconomic performance, and recessions affect the entire nation. Arkansas GDP per capita as a percentage of average GDP per capita in the U.S. declined over time. In 1997, Arkansas per capita GDP was 76.0 percent of the national GDP per capita, the highest percentage for the shown time period. Arkansas GDP per capita was only 73.2 percent of average GDP per capita in U.S. in both 2007 and 2008.

Figure 3: Arkansas and U.S. Real GDP per Capita, 1997 – 2008



Health Care and Social Assistance Industry

Production in the health care and social assistance industry is included in the calculation of a state's GDP. Within the data, the industry is divided into three sectors: ambulatory health care services, hospitals and nursing and residential care facilities, and social assistance. Table 3 shows the health care and social assistance industry's production for the years 2000, 2007, and 2008 (the most recent data available for this industry) for Arkansas as well as for the top five and bottom five states. In 2008, the Arkansas health industry accounted for \$6,036 million (in chained 2000 dollars to adjust for inflation), an increase of 31.3 percent since 2000. The state ranked 32nd among other states since 2000, in spite of the increase in absolute value. The industry's percentage of state GDP has been steadily increasing over the past years. The Arkansas health industry comprised 6.9 percent of state GDP in 2000 as compared to 7.4 percent in 2007 and 7.6 percent in 2008.

Table 3: Health Care and Social Assistance Industry's Real Production, 2000, 2007, and 2008³

State	2000			2007			2008		
	Industry GDP (Millions)	Rank	% of State GDP	Industry GDP (Millions)	Rank	% of State GDP	Industry GDP (Millions)	Rank	% of State GDP
California	\$63,867	1	5.0%	\$86,192	1	5.6%	\$91,040	1	5.9%
New York	\$53,828	2	6.9%	\$62,668	2	6.6%	\$64,610	2	6.7%
Texas	\$38,743	3	5.3%	\$52,180	3	5.8%	\$54,689	3	5.9%
Florida	\$32,955	4	7.0%	\$43,570	4	7.1%	\$45,391	4	7.5%
Pennsylvania	\$31,956	5	8.2%	\$39,678	5	9.0%	\$41,338	5	9.3%
Arkansas	\$4,597	32	6.9%	\$5,816	32	7.4%	\$6,036	32	7.6%
Montana	\$1,860	46	8.7%	\$2,364	46	8.8%	\$2,509	47	9.2%
Vermont	\$1,420	49	8.0%	\$1,944	48	9.1%	\$2,039	48	9.4%
North Dakota	\$1,588	48	8.9%	\$1,862	50	8.2%	\$2,004	49	8.3%
Alaska	\$1,283	50	4.7%	\$1,871	49	6.1%	\$1,940	50	6.5%
Wyoming	\$740	51	4.3%	\$1,046	51	5.0%	\$1,135	51	5.2%

Source: Bureau of Economic Analysis, U.S. Department of Commerce; Center estimations

The health industry's increased share of Arkansas GDP indicates that health care and social assistance have become relatively more important to the state's economy. These higher expenditures are not only due to the increased population of the state. The industry's production per capita has been increasing as well (Table 4). From 2000 to 2008, the per capita health care and social assistance industry production increased by 22.5 percent in Arkansas, from \$1,716 to \$2,105. However, the growth of the industry's per capita production in the U.S. increased even more, causing the decline in Arkansas' ranking. The state declined from 42nd place in 2000 to 43rd in 2007 and 44th in 2008. Arkansas remains among the bottom ten states in this ranking, with only 6 states having smaller industry per capita production in 2008. (The data for all 50 states and the District of Columbia are included in the Appendix A in Table 18.)

³ Production is in millions of chained 2000 dollars to adjust for inflation.

Table 4: Health Care and Social Assistance Industry's Real Production per Capita, 2000, 2007, and 2008⁴

State	2000		2007		2008	
	Industry GDP per Capita	Rank	Industry GDP per Capita	Rank	Industry GDP per Capita	Rank
District of Columbia	\$4,446	1	\$5,431	1	\$5,577	1
Massachusetts	\$3,200	3	\$3,902	2	\$4,071	2
Connecticut	\$3,212	2	\$3,652	3	\$3,793	3
Minnesota	\$2,578	8	\$3,332	4	\$3,434	4
New York	\$2,833	4	\$3,277	6	\$3,319	5
Arkansas	\$1,716	42	\$2,046	43	\$2,105	44
Nevada	\$1,655	44	\$1,977	46	\$2,023	47
Georgia	\$1,755	40	\$1,977	47	\$2,003	48
Mississippi	\$1,443	50	\$1,748	49	\$1,804	49
Utah	\$1,514	48	\$1,710	50	\$1,781	50
South Carolina	\$1,396	51	\$1,668	51	\$1,717	51

Source: Bureau of Economic Analysis, U.S. Department of Commerce; Center estimations

Health Care Industry

Among the three industry sectors included in the health care and social assistance industry, two are defined as health care sectors. One of them is the ambulatory health care services sector, which provides health care services directly or indirectly to ambulatory patients and does not usually provide inpatient services. Health practitioners in this subsector provide outpatient services, with the facilities and equipment not usually being the most significant part of the production process. The second health care sector includes hospitals and nursing and residential care facilities. Industries in the hospitals subsector provide medical, diagnostic, and treatment services that include physician, nursing, and other health services to inpatients and the specialized accommodation services required by inpatients. Industries in the nursing and residential care facilities subsector provide residential care combined with either nursing, supervisory, or other types of care as required by the residents.

⁴ Production per capita is in chained 2000 dollars to adjust for inflation.

The most recent disaggregated data for the health care industry sectors are available for 2007 only (Table 5). Arkansas health care industry production increased by 21.1 percent from 2000 to 2007, reaching \$5,098 million of chained 2000 dollars (production is adjusted for inflation for comparison purposes). This corresponds to a 0.2 percentage point increase in the share of state GDP from 6.3 percent to 6.5 percent. However, the Arkansas ranking remained 32nd among all the states and the District of Columbia throughout all the years from 2000 to 2007.

Table 5: Health Care Industry's Real Production, 2000 and 2007⁵

State	2000			2007		
	Industry GDP (Millions)	Ranking	Share of State GDP	Industry GDP (Millions)	Ranking	Share of State GDP
California	\$58,009	1	4.5%	\$77,058	1	5.5%
New York	\$46,132	2	5.9%	\$52,129	2	5.5%
Texas	\$36,138	3	5.0%	\$48,342	3	5.3%
Florida	\$30,774	4	6.5%	\$40,005	4	6.5%
Pennsylvania	\$29,473	5	7.6%	\$35,598	5	8.1%
Arkansas	\$4,211	32	6.3%	\$5,098	32	6.5%
South Dakota	\$1,677	47	7.1%	\$2,111	47	7.2%
North Dakota	\$1,485	48	8.2%	\$1,698	48	7.5%
Vermont	\$1,351	49	7.1%	\$1,666	49	7.8%
Alaska	\$1,191	50	4.1%	\$1,557	50	5.1%
Wyoming	\$675	51	3.7%	\$863	51	4.1%

Source: Bureau of Economic Analysis, U.S. Department of Commerce; Center estimations

The health care industry's per capita production for 2000 and 2007 are presented in Table 6. The Arkansas ranking in per capita terms was much lower than the ranking in absolute production. In addition, the Arkansas per capita health industry production ranking declined from 43rd place in 2000 to 45th in 2007. Although production per capita increased by 14.1 percent over the seven year period to \$1,794, the growth rate still lagged behind the national average of 18.7 percent.

⁵ Production is in millions of chained 2000 dollars to adjust for inflation.

Table 6: Health Care Industry's Real Production per Capita, 2000 and 2007⁶

State	2000		2007	
	Industry GDP per Capita	Rank	Industry GDP per Capita	Rank
District of Columbia	\$3,750	1	\$4,270	1
Massachusetts	\$2,878	3	\$3,480	2
Connecticut	\$2,923	2	\$3,226	3
Minnesota	\$2,305	8	\$2,924	4
Rhode Island	\$2,461	4	\$2,902	5
Arkansas	\$1,572	43	\$1,794	45
New Mexico	\$1,355	48	\$1,752	47
Wyoming	\$1,300	51	\$1,649	48
Mississippi	\$1,338	49	\$1,598	49
Utah	\$1,404	47	\$1,559	50
South Carolina	\$1,302	50	\$1,535	51

Source: Bureau of Economic Analysis, U.S. Department of Commerce; Center estimations

Production in the health care industry sectors comprises a majority of the production in the health care and social assistance industry in Arkansas. In 2007, it represented 87.7 percent. The Arkansas ranking in production in the health care and social assistance industry as well as in the health care industry sectors was the same from 2000 to 2007 (32nd place). Although 2008 data for the health care industry sectors are not available, conclusions can be made based on the overall health care and social assistance industry's performance. Since production in the health care industry sectors grew in 2008 in absolute terms and as a percentage of the state GDP, the ranking of Arkansas among other states probably remained about the same. The ranking of production per capita most likely declined in Arkansas, despite its growth in absolute terms.

⁶ Production per capita is in chained 2000 dollars to adjust for inflation.

MEDICAID PROGRAM EXPENDITURES

Arkansas Medicaid is a joint federal and state program that provides necessary medical services to needy and low-income persons. The Arkansas Department of Human Services administers the Medicaid program through the Arkansas Division of Medical Services. Table 7 shows Medicaid expenditures in fiscal years 2000 and 2008 (the latest data available for 50 states and the District of Columbia, with fiscal year running from October 1 through September 30), data available from the Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services (provided by the Kaiser Family Foundation). Arkansas' ranking for total Medicaid expenditures increased from 31st to 29th during these years. Because 2008 data for the District of Columbia are not available, the actual increase was by a single position. The increase in ranking is due to the significant growth of 112.2 percent in the state's spending, from \$1,617 million in 2000 to \$3,431 million in 2008. This compares to a growth rate of 66.3 percent in total U.S. Medicaid spending during the same time period. Although Medicaid expenditures are available for fiscal years while state GDP is calculated for calendar years, the percentage calculation can still give some insights to the growth of the program. The Arkansas share of Medicaid spending grew by 1.1 percentage points from 2000 to 2008. Despite the mid-level ranking, the amount of expenditures in Arkansas was closer to the expenses of the bottom five states than to the top five states. Arkansas spent three times as much as Delaware (ranked 46th), but the state's Medicaid expenses comprised less than a quarter of Illinois' expenses (ranked 5th).

Table 7: Medicaid Expenditures, FY2000 and FY2008⁷

State	FY2000			FY2008 ⁸		
	Expenditures, millions of dollars	Ranking	Share of State GDP	Expenditures, millions of dollars	Ranking	Share of State GDP
California	\$20,052	2	1.6%	\$38,291	1	2.1%
New York	\$29,641	1	3.8%	\$31,040	2	2.7%
Pennsylvania	\$9,426	4	2.4%	\$17,785	3	3.2%
Florida	\$7,056	7	1.5%	\$14,922	4	2.0%
Illinois	\$7,516	5	1.6%	\$13,824	5	2.2%
Arkansas	\$1,617	31	2.4%	\$3,431	29	3.5%
Delaware	\$507	45	1.2%	\$991	46	1.6%
Montana	\$443	48	2.1%	\$753	47	2.1%
South Dakota	\$393	49	1.7%	\$701	48	1.9%
North Dakota	\$390	50	2.2%	\$543	49	1.7%
Wyoming	\$222	51	1.3%	\$504	50	1.4%

Source: Kaiser Family Foundation; Bureau of Economic Analysis; Center estimations

As for Medicaid expenditures per capita, Arkansas' spending increased by 98.2 percent from 2000 to 2008 (Table 8). This increase is significantly higher than 54.1 percent growth in spending experienced nationally. Medicaid spending per capita was \$1,196 in 2008 in Arkansas. As a result, the state's rank jumped 12 positions from 2000 to 2008.

⁷ Medicaid expenditures data are available in current dollars and for fiscal years. State GDP data used for calculation are also in current dollars for comparison, but for calendar years.

⁸ The 2008 data for the District of Columbia are not available.

Table 8: Medicaid Expenditures per Capita, FY2000 and FY2008

State	FY2000		FY2008	
	Expenditures per Capita	Ranking	Expenditures per Capita	Ranking
Rhode Island	\$994	4	\$1,744	1
Vermont	\$810	7	\$1,615	2
New York	\$1,560	1	\$1,594	3
Maine	\$929	5	\$1,584	4
New Mexico	\$647	18	\$1,545	5
Arkansas	\$604	27	\$1,196	15
Virginia	\$383	49	\$685	46
Utah	\$360	50	\$621	47
Colorado	\$418	48	\$565	48
Texas	\$480	42	\$554	49
Nevada	\$283	51	\$435	50

Source: Kaiser Family Foundation; U.S. Census Bureau; Center estimations

The increase in Arkansas Medicaid spending was mainly due to the increase in the number of program participants. Examining average Medicaid expenditures per enrolled person (eligible person) by state, Arkansas ranked at the bottom (Table 9). Enrollees are defined as individuals who participate in Medicaid for any length of time during the federal fiscal year. They may not actually use any services during this period, but they are reported as enrolled in the program and are eligible to receive services at least one month. Although Arkansas average spending per enrollee increased from 2000 to 2006, the growth rate was lower than the average nationwide. As a result, the state's ranking declined by two positions during this time period. Arkansas was among the bottom six states and ranked 46th in fiscal year 2006 (the latest data available).

Table 9: Average Medicaid Expenditures, FY2000 and FY2006⁹

State	FY2000		FY2006	
	Expenditures per Enrollee	Ranking	Expenditures per Enrollee	Ranking
District of Columbia	\$5,709	8	\$8,484	1
Rhode Island	\$5,732	7	\$8,082	2
New York	\$8,714	1	\$7,927	3
New Jersey	\$6,212	5	\$7,869	4
Maine	\$5,702	9	\$7,775	5
Arkansas	\$3,206	44	\$3,676	46
Louisiana	\$3,978	31	\$3,563	47
Texas	\$3,702	36	\$3,367	48
Georgia	\$3,467	40	\$3,296	49
California	\$2,487	51	\$2,740	50
Arizona	\$2,962	47	\$2,206	51

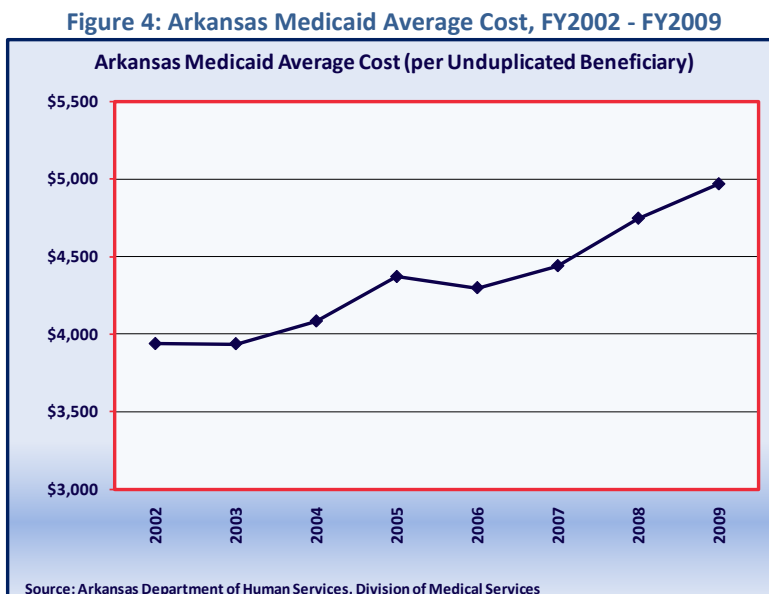
Source: Centers for Medicare and Medicaid Services; Kaiser Family Foundation; Center estimations

The latest data by state from the Urban Institute and Kaiser Commission (based on data from the Centers for Medicare and Medicaid Services) are available for 2008 on total spending and for 2006 on average spending per enrollee. These data allow a comparison of Arkansas to other states and the District of Columbia. Information on the Medicaid program's recent history in the state is provided by the Division of Medical Services at the Arkansas Department of Human Services. The Arkansas Medicaid Program Overview report offers data for fiscal year 2009. Overall, in 2009, total Medicaid spending increased in Arkansas to \$3.7 billion. Medicaid represented 18.5 percent of the \$22.4 billion budget of the state of Arkansas and 16.5 percent of the state general revenue funded budget of \$4.4 billion. Although the number of enrollees declined from 2008 to 753,166 in 2009, the number of beneficiaries, or people actually

⁹ FY2006 data are Medicaid and the Uninsured estimates by the Urban Institute and Kaiser Commission based on data from Medicaid Statistical Information System (MSIS) reports from the Centers for Medicare and Medicaid Services (CMS), 2009. The source of FY2000 enrollee data is CMS and the source of FY2000 expenditures is Kaiser Family Foundation, estimations were done by the Center for Business and Economic Research staff.

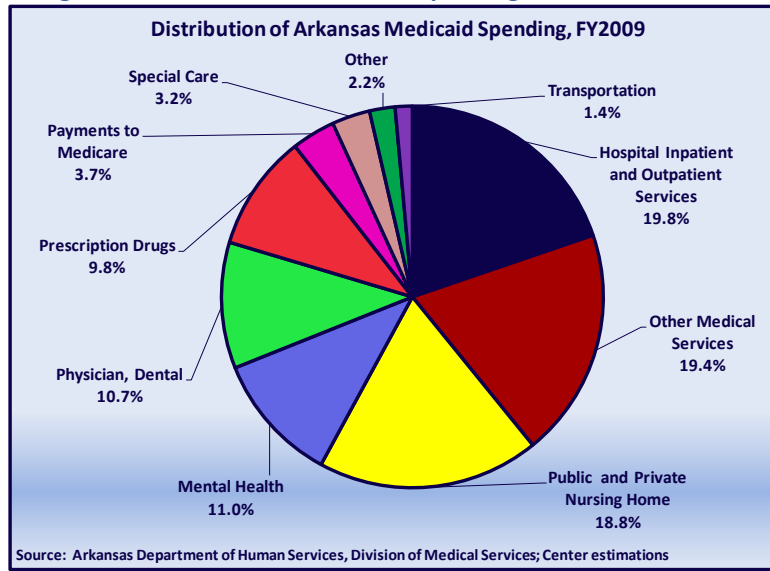
receiving Medicaid services, continued to increase, reaching 747,851 unduplicated beneficiaries in 2009.

The average Arkansas spending per unduplicated beneficiary increased to \$4,969 in 2009 (Figure 4). This represents a 26.2 percent increase from 2002 average spending of \$3,937.



Information on how total Medicaid funds were distributed in Arkansas during fiscal year 2009 is provided in Figure 5. The data show that hospital outpatient and inpatient services as well as public and private nursing home services amounted to about one fifth of the total spending each, with 19.8 percent and 18.8 percent, respectively. The rest of Arkansas Medicaid program spending was distributed, in decreasing order of importance to: other medical services (19.4 percent), mental health services (11.0 percent), physician and dental services (10.7 percent), prescribed drugs (9.8 percent), payments to Medicare (3.7 percent), special care (3.2 percent), other services (2.2 percent), and transportation (1.4 percent). The other medical services category includes additional medical services, intermediate care facilities, and Easter Seals. Payments to Medicare are premiums paid by Medicaid for Medicare enrollees and crossover claims. Special care includes home health, private duty nursing, personal care, and hospice services. The other category includes vendor contracts for hospital/medical, targeted case management, and other adjustments. Finally, the transportation category includes emergency and non-emergency transportation.

Figure 5: Distribution of Medicaid Spending in Arkansas, FY 2009



The Arkansas Medicaid Program Overview report also provides data on a county basis. Medicaid expenditures are estimated based on the county of residence of participants just as state expenditures are estimated based on the state of residence of participants. The top ten counties with largest Medicaid spending in fiscal year 2009 were: Pulaski, Faulkner, Washington, Sebastian, Saline, Craighead, Garland, Benton, Jefferson, and White (Table 10). Their Medicaid expenditures varied from almost \$410.3 million in Pulaski County to \$65.9 million in White County. The same ten counties were among the top twelve counties based on the number of enrollees. (Enrollees who moved from one county to another during the year are included in counts for both counties.) When looking at the average spending per enrollee, only Faulkner and Saline counties stayed among the top ten counties in ranking, with \$5,995 and \$6,402 per enrollee, respectively. Data on Medicaid expenditures, number of enrollees, and average spending per enrollee for all Arkansas counties are provided in Table 19 in Appendix A.

Table 10: Medicaid Expenditures, Enrollees, and Average Spending per Enrollee in Selected Arkansas Counties, FY2009¹⁰

County	Medicaid Spending	Ranking	Number of Enrollees	Ranking	Spending per Enrollee	Ranking
Pulaski	\$410,292,305	1	101,811	1	\$4,030	29
Faulkner	\$131,535,271	2	21,942	9	\$5,995	3
Washington	\$127,070,681	3	41,053	3	\$3,095	66
Sebastian	\$120,187,502	4	33,205	5	\$3,620	47
Saline	\$118,253,796	5	18,470	12	\$6,402	2
Craighead	\$115,909,255	6	26,718	6	\$4,338	16
Garland	\$103,987,899	7	25,379	8	\$4,097	26
Benton	\$101,909,645	8	38,605	4	\$2,640	74
Jefferson	\$86,017,761	9	25,646	7	\$3,354	56
White	\$65,951,631	10	19,102	11	\$3,453	54

Source: Arkansas Department of Human Services, Division of Medical Services; Center estimations

METHODOLOGY

To estimate the economic impact of Medicaid in Arkansas, data on Medicaid spending from the Arkansas Medicaid Program Overview report were used. Values of expenditures categories in fiscal year 2009 were used as inputs to the IMPLAN input/output model, which were then used to estimate the indirect and induced effects associated with direct Medicaid spending.

For the analysis, the inputs were classified based on industry description and NAICS code and the compatibility with IMPLAN industry sectors. Dental, physician, and mental health spending were entered under offices of physicians, dentists, and other health practitioners sector; other medical and other services were entered under medical and diagnostic labs and outpatient and other ambulatory care services sector; hospital inpatient and outpatient services were entered under hospitals sector; public and private nursing home spending were entered under nursing and residential care facilities; payments to Medicare were entered under other Federal government enterprises sector; and transportation data were entered under the transit and ground passenger transportation sector. Special care, intermediate care facilities (ICF), Easter

¹⁰ The “top ten” counties were selected based on their total Medicaid expenditures during fiscal year 2009.

Seals, and prescription drugs were entered under home health care services sector. The latter sector is defined as an industry that comprises establishments primarily engaged in providing skilled nursing services in the home, along with a range of the following: personal care services; medical equipment and supplies medications; homemaker and companion services; and other medical social services.

IMPLAN is a regional impact model that enables the evaluation of the economic impact of specific activities such as construction or operation of public works projects, as well as retail, wholesale, manufacturing, and service sales within an economy. IMPLAN was originally developed by the U.S. Department of Agriculture, the Forest Service in cooperation with the Federal Emergency Management Agency (FEMA), the U.S. Department of Interior Bureau of Land Management, and the University of Minnesota to assist the Forest Service in land and resource management planning.

The basic data sources for the current edition of the IMPLAN database and the models used in this study are the Input-Output Accounts of the United States, developed by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA), and county income and employment data published by BEA and the Bureau of Labor Statistics. The model reflects 2008 industrial structure and technology, and 2008 prices (latest model available). Trade flows and the results of this analysis were adjusted to reflect prices of 2009. In particular, economic output and employee compensation values and state and local tax revenues are presented in 2009 dollars.

IMPLAN uses a 525-sector input-output model to measure the effects of three types of impacts: direct, indirect, and induced. Direct impacts consist of employment and purchases of goods and services in the region resulting from the activity being evaluated, in this case, health care services and services related to it. Indirect (inter-industry) impacts consist of goods and services purchased by the firms, which supply inputs consumed in the direct activity. Induced impacts consist of increased household purchases of goods and services in the region by employees of direct and indirect employers. The model generates multipliers, which summarize the magnitude of the indirect and induced effects generated by a given direct change, to estimate changes in output, income, and employment. In other words, the multiplier is the ratio of total impact to direct impact.

In the IMPLAN model, inter-industry relationships (use and make coefficients) are quantified based on data on the production functions of the different industries in the region. The IMPLAN model was used to estimate multipliers based on those coefficients in the state of Arkansas. Direct spending, total economic activity, total labor income, total employment, and total property income were generated by this model.

For this study, the geographic area considered first was the entire state of Arkansas. Additionally, separate models were created for counties with ten largest Medicaid expenditures in fiscal year 2009. These counties were: Pulaski, Faulkner, Washington, Sebastian, Saline,

Craighead, Garland, Benton, Jefferson, and White. Since no detailed data were available on spending by county, the distribution of Medicaid expenditures in these counties was assumed to be the same as in the state overall. Thus, the same industry sectors were used: offices of physicians, dentists, and other health practitioners; home health care services; medical and diagnostic labs and outpatient and other ambulatory care services; hospitals; nursing and residential care facilities; other Federal government enterprises; and transit and ground passenger transportation. Economic output, employment, and state and local tax effects were generated by the IMPLAN model.

ECONOMIC IMPACTS OF MEDICAID IN ARKANSAS

The results of the economic analysis are presented in this section. Included are the detailed impacts of the Arkansas Medicaid spending for the state and for the top ten Arkansas counties by largest Medicaid expenditures for 2009. Overall output, employment, as well as state and local tax impacts are provided. Additionally, the return on Medicaid spending in Arkansas is discussed in the end of the section.

Arkansas Total Output, Employment, and Tax Impacts

The economic impact of Medicaid spending in Arkansas was estimated using the expenditures made in fiscal year 2009 and applying the methodology described above. The impacts of the Medicaid program on output, employment, and employee compensation are presented in Table 11. The average multiplier or the ratio of total to direct economic impact was estimated to be 1.60 for output and 1.45 for employment. In 2009, total economic activity of \$5.9 billion was generated as a result of Medicaid spending. Accordingly, 70,277 full-time jobs in the state of Arkansas were attributable to the Medicaid program last year. Total payroll costs associated with these jobs were evaluated to be \$2.4 billion with an average multiplier of 1.34. Estimated employee compensation included wages and salary, all benefits (health, retirement, etc), and employer paid payroll taxes such as the employer portion of social security and unemployment taxes. Detailed information on output and employment impacts by industry sectors are provided in Tables 20, 21, and 22 in Appendix B.

Table 11: Economic Impact of Arkansas Medicaid: Output, Employment, and Employee Compensation, 2009

Category	Direct Economic Impact	Indirect Economic Impact	Induced Economic Impact	Total Economic Output Impact	Average Multiplier
Output	\$3,716,306,944	\$777,214,784	\$1,455,329,688	\$5,948,850,688	1.60
Employment	48,505	37,785	13,986	70,277	1.45
Employee Compensation	\$1,801,595,954	\$219,728,985	\$394,390,799	\$2,415,715,763	1.34

Source: Arkansas Department of Human Services; IMPLAN; Center for Business and Economic Research estimates

The Medicaid program is financed by taxpayers, but the expenditures associated with Medicaid generate additional tax revenues that are then collected by state and local governments (Table 12). According to the IMPLAN model, the Medicaid Program added \$231.8 million to the state and local governments' revenues through employee compensation taxes, indirect business taxes, sales and use taxes, and business taxes.

Table 12: Economic State and Local Tax Impacts of Arkansas Medicaid, 2009

Category	2009
Employee Compensation	\$7,307,860
Indirect Business Tax	\$141,899,300
Households	\$54,639,570
Corporations	\$27,968,640
Total Arkansas State and Local Taxes	\$231,815,370

Source: IMPLAN; Center estimations

Output, Employment, and Tax Impacts for Selected Arkansas Counties

Counties with the largest Medicaid expenditures in fiscal year 2009 were: Pulaski, Faulkner, Washington, Sebastian, Saline, Craighead, Garland, Benton, Jefferson, and White. Table 13 presents the impacts of the Medicaid program spending on economic output of these counties. The average multiplier or the ratio of total to direct economic impact was estimated to range from 1.24 for output in Saline County to 1.66 for output in Pulaski County. The largest total economic activity of \$681.3 million was generated as a result of Medicaid spending in Pulaski

County in 2009. In White County, ranked 10th on total Medicaid expenditures, the total output impact was estimated to be \$92.4 million last year.

Table 13: Economic Output Impact of Medicaid for Selected Arkansas Counties, 2009

County	Direct Economic Impact	Indirect Economic Impact	Induced Economic Impact	Total Economic Output Impact	Average Multiplier
Pulaski	\$410,292,256	\$111,081,392	\$159,925,968	\$681,299,584	1.66
Faulkner	\$131,535,280	\$16,980,974	\$38,399,752	\$186,916,000	1.42
Washington	\$127,070,672	\$16,861,080	\$29,682,556	\$173,614,304	1.37
Sebastian	\$120,187,504	\$24,872,172	\$38,116,204	\$183,175,872	1.52
Saline	\$113,887,520	\$8,670,555	\$18,230,736	\$140,788,816	1.24
Craighead	\$115,909,256	\$22,497,490	\$41,390,652	\$179,797,392	1.55
Garland	\$103,987,896	\$20,059,024	\$39,376,312	\$163,423,232	1.57
Benton	\$101,909,648	\$13,078,908	\$19,843,002	\$134,831,552	1.32
Jefferson	\$86,017,768	\$10,460,246	\$17,172,350	\$113,650,368	1.32
White	\$65,951,632	\$8,090,111	\$18,398,174	\$92,439,920	1.40

Source: Arkansas Department of Human Services; IMPLAN; Center estimations

In conjunction with economic output impacts, employment impacts were estimated for these ten counties (Table 14). The average multiplier of employment impacts varied from 1.18 for Saline County to 1.50 for Pulaski County. About 7,347 full-time jobs were attributable to the Medicaid program in Pulaski County last year. Faulkner County followed with 2,346 jobs and Craighead County was third with a total of 2,235 jobs as a result of Medicaid program employment impacts in 2009.

Table 14: Economic Employment Impact of Medicaid for Selected Arkansas Counties, 2009

County	Direct Economic Impact	Indirect Economic Impact	Induced Economic Impact	Total Employment Impact	Average Multiplier
Pulaski	4,892	1,037	1,417	7,347	1.50
Faulkner	1,769	180	397	2,346	1.33
Washington	1,521	176	280	1,977	1.30
Sebastian	1,522	298	387	2,207	1.45
Saline	1,681	116	187	1,983	1.18
Craighead	1,534	262	439	2,235	1.46
Garland	1,428	258	427	2,113	1.48
Benton	1,271	121	172	1,564	1.23
Jefferson	1,284	106	173	1,563	1.22
White	862	93	198	1,153	1.34

Source: IMPLAN; Center estimations

Although the Medicaid program is funded by taxpayers, spending associated with Medicaid also generated additional tax revenues for state and local governments (Table 15). Medicaid spending in Pulaski, Faulkner, Washington, Sebastian, Saline, Craighead, Garland, Benton, Jefferson, and White counties was estimated to result in \$26.3 million; \$7.4 million; \$6.3 million; \$6.5 million; \$5.3 million; \$7.0 million; \$6.2 million; \$4.9 million; \$3.7 million; and \$3.5 million, respectively. The IMPLAN model estimates showed that these state and local governments' revenues were collected through employee compensation taxes, indirect business taxes, sales and use taxes, and business taxes.

Table 15: Economic State and Local Tax Impacts of Medicaid for Selected Arkansas Counties, 2009

County	Employee Compensation	Indirect Business Tax	Households	Corporations	Total State and Local Taxes
Pulaski	\$948,738	\$16,359,750	\$5,731,531	\$3,314,613	\$26,354,632
Faulkner	\$271,210	\$4,154,253	\$2,138,170	\$862,030	\$7,425,663
Washington	\$248,322	\$3,626,910	\$1,629,148	\$803,434	\$6,307,814
Sebastian	\$126,590	\$3,976,568	\$1,551,419	\$849,724	\$6,504,301
Saline	\$244,949	\$2,862,538	\$1,569,654	\$615,340	\$5,292,481
Craighead	\$228,430	\$4,263,225	\$1,649,574	\$866,809	\$7,008,038
Garland	\$172,802	\$3,963,273	\$1,522,202	\$503,863	\$6,162,140
Benton	\$89,033	\$2,770,015	\$1,399,233	\$609,862	\$4,868,143
Jefferson	\$170,736	\$2,159,060	\$907,852	\$499,255	\$3,736,903
White	\$92,845	\$2,015,855	\$923,559	\$427,444	\$3,459,703

Source: IMPLAN; Center estimations

Return on Medicaid Investment in Arkansas

As discussed above, Medicaid spending in Arkansas was estimated to have a total impact of \$5.9 billion on state's economy in 2009. This total output impact resulted from direct spending of \$3.7 billion in Arkansas. Accordingly, the average economic multiplier or the ratio of total to direct economic output impact was estimated to be 1.60.

Medicaid spending, however, includes both state and federal expenditures. To estimate the return on Medicaid spending from the Arkansas state budget, it is necessary to look at the percentages of state and federal spending. Table 16 provides information on the state and federal shares of Medicaid expenditures in fiscal year 2009. According to the Arkansas Department of Human Services, about \$2.7 billion out of total \$3.7 billion were spent by the federal government and \$943 million were spent by the Arkansas state government. This represents 72.7 percent and 27.3 percent of total Medicaid program expenditures, respectively. Overall, each dollar spent by the state government was matched by \$2.94 by the federal government.

Table 16: Arkansas Medicaid Spending Estimates, State and Federal Shares for FY2009

Total Spending (Millions)	Federal Share (Millions)	State Share (Millions)	Federal Share, %	State Share, %	Federal Match per \$1 of State Spending
\$3,716	\$2,733	\$943	72.7%	27.3%	\$2.94

Source: Arkansas Department of Human Services; Center estimations

To estimate the impact of Medicaid spending by the state government in 2009, the share of state government or \$943 million should be divided by the total impact of Medicaid expenditures estimated by IMPLAN or \$5.9 billion. The resulted average multiplier is equal to 6.31. Thus, each dollar spent by the state government on Medicaid Program is estimated to result in \$6.31 of total output impacts for the state economy.

In addition to monetary impacts, the Medicaid program also provides non-monetary impacts for the state of Arkansas, such as improved health outcomes for its participants. These impacts of Medicaid spending on the labor workforce are difficult to evaluate. The economic literature discusses the impacts of poor health such as lower wages [Chirikos and Nestel, 1985] and benefits of healthier individuals such as decreased absenteeism [Karasek and Theorell, 1990]. Declines in absenteeism, in turn, translate into increased productivity, efficiency, the quality of the service provided, and profitability of the firm [Marsden and Moriconi, 2009].

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APPENDIX A: DETAILED DATA TABLES

Table 17: State Real Gross Domestic Product per Capita, 2000, 2004, and 2008¹¹

State	2000		2004		2008	
	GDP per Capita	Ranking	GDP per Capita	Ranking	GDP per Capita	Ranking
Alabama	\$25,738	47	\$28,369	46	\$29,411	45
Alaska	\$43,086	5	\$43,781	5	\$43,640	7
Arizona	\$30,683	33	\$31,395	37	\$32,343	39
Arkansas	\$24,942	48	\$27,075	48	\$27,753	49
California	\$37,859	9	\$39,484	9	\$42,064	8
Colorado	\$39,711	8	\$39,259	11	\$41,102	11
Connecticut	\$47,025	3	\$47,716	3	\$50,758	3
Delaware	\$52,737	2	\$56,500	2	\$56,401	2
District of Columbia	\$102,670	1	\$116,540	1	\$126,407	1
Florida	\$29,370	38	\$31,684	36	\$32,925	34
Georgia	\$35,344	15	\$34,872	23	\$34,017	31
Hawaii	\$33,184	22	\$35,665	19	\$38,644	18
Idaho	\$26,925	45	\$28,486	45	\$29,890	43
Illinois	\$37,321	12	\$38,494	13	\$40,006	14
Indiana	\$31,917	28	\$33,735	30	\$32,917	35
Iowa	\$30,801	31	\$34,283	26	\$36,773	24
Kansas	\$30,754	32	\$32,338	35	\$35,013	29
Kentucky	\$27,638	44	\$29,001	43	\$29,740	44

¹¹GDP per capita is in chained 2000 dollars to adjust for inflation.

State	2000		2004		2008	
	GDP per Capita	Ranking	GDP per Capita	Ranking	GDP per Capita	Ranking
Louisiana	\$29,430	37	\$31,045	39	\$32,842	36
Maine	\$27,828	42	\$29,756	42	\$30,637	42
Maryland	\$33,965	19	\$37,109	16	\$39,205	16
Massachusetts	\$43,213	4	\$44,512	4	\$48,088	5
Michigan	\$33,875	21	\$33,483	31	\$32,601	38
Minnesota	\$37,515	11	\$40,381	8	\$41,573	10
Mississippi	\$22,563	51	\$23,556	51	\$24,403	51
Missouri	\$31,522	30	\$32,455	34	\$32,779	37
Montana	\$23,653	49	\$25,938	49	\$28,170	48
Nebraska	\$32,383	26	\$34,991	22	\$37,326	23
Nevada	\$36,527	14	\$38,667	12	\$39,687	15
New Hampshire	\$35,085	17	\$36,952	17	\$38,420	19
New Jersey	\$40,900	7	\$43,591	6	\$44,957	6
New Mexico	\$27,860	41	\$30,126	40	\$30,935	41
New York	\$40,906	6	\$42,998	7	\$49,499	4
North Carolina	\$33,878	20	\$34,682	24	\$35,719	26
North Dakota	\$27,686	43	\$31,377	38	\$37,832	21
Ohio	\$32,736	24	\$33,852	28	\$33,568	33
Oklahoma	\$25,987	46	\$27,715	47	\$29,359	46
Oregon	\$32,773	23	\$35,197	21	\$38,801	17
Pennsylvania	\$31,715	29	\$33,737	29	\$35,641	27
Rhode Island	\$31,987	27	\$35,319	20	\$36,283	25

State	2000		2004		2008	
	GDP per Capita	Ranking	GDP per Capita	Ranking	GDP per Capita	Ranking
South Carolina	\$27,965	40	\$28,561	44	\$28,364	47
South Dakota	\$30,567	35	\$34,337	25	\$37,690	22
Tennessee	\$30,659	34	\$33,392	32	\$33,825	32
Texas	\$34,719	18	\$35,942	18	\$38,044	20
Utah	\$30,108	36	\$29,903	41	\$32,049	40
Vermont	\$29,156	39	\$32,788	33	\$34,924	30
Virginia	\$436,702	13	\$39,462	10	\$41,769	9
Washington	\$37,550	10	\$37,220	15	\$40,407	13
West Virginia	\$22,954	50	\$24,300	50	\$25,533	50
Wisconsin	\$32,701	25	\$34,128	27	\$35,239	28
Wyoming	\$35,086	16	\$37,865	14	\$40,837	12

Source: Bureau of Economic Analysis, U.S. Department of Commerce; Center estimations

Table 18: Health Care and Social Assistance Industry's Real Production per Capita by State, 2000, 2004, and 2008¹²

State	2000		2004		2008	
	Industry GDP per Capita	Ranking	Industry GDP per Capita	Ranking	Industry GDP per Capita	Ranking
Alabama	\$1,680	43	\$1,907	43	\$2,080	45
Alaska	\$2,045	29	\$2,680	16	\$2,819	18
Arizona	\$1,758	39	\$2,028	39	\$2,361	35
Arkansas	\$1,716	42	\$1,945	41	\$2,105	44
California	\$1,879	35	\$2,220	33	\$2,489	27
Colorado	\$1,947	33	\$2,200	35	\$2,396	33
Connecticut	\$3,212	2	\$3,431	3	\$3,793	3
Delaware	\$2,516	9	\$2,832	12	\$3,198	12
District of Columbia	\$4,446	1	\$5,186	1	\$5,577	1
Florida	\$2,054	28	\$2,254	30	\$2,464	29
Georgia	\$1,755	40	\$1,923	42	\$2,003	48
Hawaii	\$2,190	19	\$2,372	23	\$2,625	23
Idaho	\$1,602	46	\$1,821	47	\$2,044	46
Illinois	\$2,153	20	\$2,357	24	\$2,586	25
Indiana	\$2,018	30	\$2,262	29	\$2,459	30
Iowa	\$1,990	31	\$2,205	34	\$2,391	34
Kansas	\$1,982	32	\$2,241	31	\$2,467	28
Kentucky	\$1,943	34	\$2,221	32	\$2,356	36
Louisiana	\$1,825	37	\$2,042	38	\$2,248	40

¹² Production per capita is in chained 2000 dollars to adjust for inflation.

State	2000		2004		2008	
	Industry GDP per Capita	Ranking	Industry GDP per Capita	Ranking	Industry GDP per Capita	Ranking
Maine	\$2,603	6	\$3,001	7	\$3,262	9
Maryland	\$2,339	14	\$2,620	18	\$2,943	15
Massachusetts	\$3,200	3	\$3,529	2	\$4,071	2
Michigan	\$2,091	25	\$2,265	28	\$2,547	26
Minnesota	\$2,578	8	\$3,019	6	\$3,434	4
Mississippi	\$1,443	50	\$1,655	49	\$1,804	49
Missouri	\$2,141	23	\$2,305	26	\$2,442	31
Montana	\$2,059	27	\$2,329	25	\$2,592	24
Nebraska	\$2,142	22	\$2,428	21	\$2,661	22
Nevada	\$1,655	44	\$1,868	46	\$2,023	47
New Hampshire	\$2,456	12	\$2,837	11	\$3,259	10
New Jersey	\$2,502	10	\$2,888	9	\$3,206	11
New Mexico	\$1,537	47	\$1,897	45	\$2,169	41
New York	\$2,833	4	\$3,076	4	\$3,319	5
North Carolina	\$1,780	38	\$2,054	37	\$2,264	38
North Dakota	\$2,477	11	\$2,758	14	\$3,124	13
Ohio	\$2,260	18	\$2,510	19	\$2,694	20
Oklahoma	\$1,644	45	\$1,899	44	\$2,140	42
Oregon	\$2,078	26	\$2,433	20	\$2,693	21
Pennsylvania	\$2,601	7	\$2,983	8	\$3,290	7
Rhode Island	\$2,712	5	\$3,069	5	\$3,307	6

State	2000		2004		2008	
	Industry GDP per Capita	Ranking	Industry GDP per Capita	Ranking	Industry GDP per Capita	Ranking
South Carolina	\$1,396	51	\$1,573	51	\$1,717	51
South Dakota	\$2,404	13	\$2,826	13	\$3,122	14
Tennessee	\$2,268	17	\$2,680	17	\$2,883	17
Texas	\$1,850	36	\$2,116	36	\$2,250	39
Utah	\$1,514	48	\$1,622	50	\$1,781	50
Vermont	\$2,328	15	\$2,841	10	\$3,283	8
Virginia	\$1,743	41	\$1,988	40	\$2,278	37
Washington	\$2,153	21	\$2,423	22	\$2,707	19
West Virginia	\$2,094	24	\$2,268	27	\$2,421	32
Wisconsin	\$2,304	16	\$2,684	15	\$2,897	16
Wyoming	\$1,498	49	\$1,813	48	\$2,130	43

Source: Bureau of Economic Analysis, U.S. Department of Commerce; Center estimations

Table 19: Medicaid Expenditures, Enrollees, and Average Spending per Enrollee in Arkansas by County, FY2009

County	Medicaid Spending	Ranking	Number of Enrollees	Ranking	Spending per Enrollee	Ranking
Arkansas	\$22,936,900	40	5,775	42	\$3,972	32
Ashley	\$29,391,263	31	7,514	30	\$3,912	35
Baxter	\$34,093,169	26	92,130	2	\$370	75
Benton	\$101,909,645	8	38,605	4	\$2,640	74
Boone	\$33,465,592	27	9,227	24	\$3,627	45
Bradley	\$22,267,223	45	3,899	55	\$5,711	6
Calhoun	\$4,317,697	75	1,361	75	\$3,172	64
Carroll	\$18,288,324	48	6,674	33	\$2,740	71
Chicot	\$22,808,667	41	5,152	47	\$4,427	13
Clark	\$34,712,664	25	6,055	36	\$5,733	5
Clay	\$20,316,543	47	4,746	50	\$4,281	20
Cleburne	\$22,611,389	42	6,034	37	\$3,747	40
Cleveland	\$8,797,758	72	2,286	74	\$3,849	38
Columbia	\$29,965,727	29	8,001	28	\$3,745	41
Conway	\$27,619,800	33	6,369	34	\$4,337	17
Craighead	\$115,909,255	6	26,718	6	\$4,338	16
Crawford	\$54,025,807	15	16,180	14	\$3,339	59
Crittenden	\$65,195,504	11	20,496	10	\$3,181	63
Cross	\$24,305,807	38	5,835	41	\$4,166	24
Dallas	\$22,403,394	43	2,837	67	\$7,897	1
Desha	\$21,933,767	46	5,251	46	\$4,177	23
Drew	\$26,923,215	34	5,870	40	\$4,587	10

County	Medicaid Spending	Ranking	Number of Enrollees	Ranking	Spending per Enrollee	Ranking
Faulkner	\$131,535,271	2	21,942	9	\$5,995	3
Franklin	\$17,462,226	51	5,054	48	\$3,455	53
Fulton	\$16,205,483	54	3,742	59	\$4,331	19
Garland	\$103,987,899	7	25,379	8	\$4,097	26
Grant	\$11,789,426	66	3,730	60	\$3,161	65
Greene	\$47,957,021	17	12,212	19	\$3,927	33
Hempstead	\$29,432,414	30	7,847	29	\$3,751	39
Hot Spring	\$35,446,812	24	8,892	25	\$3,986	30
Howard	\$15,921,946	56	4,492	51	\$3,545	49
Independence	\$42,575,492	19	10,351	22	\$4,113	25
Izard	\$16,042,756	55	3,774	58	\$4,251	21
Jackson	\$25,297,140	36	5,746	44	\$4,403	15
Jefferson	\$86,017,761	9	25,646	7	\$3,354	56
Johnson	\$24,394,874	37	8,074	27	\$3,021	69
Lafayette	\$9,639,594	70	2,728	70	\$3,534	51
Lawrence	\$28,383,079	32	5,999	38	\$4,731	8
Lee	\$17,867,279	50	4,275	53	\$4,179	22
Lincoln	\$14,728,015	60	3,708	61	\$3,972	31
Little River	\$11,891,306	65	3,669	62	\$3,241	62
Logan	\$36,817,156	23	7,299	31	\$5,044	7
Lonoke	\$56,690,571	14	14,436	16	\$3,927	34
Madison	\$12,897,517	64	4,232	54	\$3,048	68
Marion	\$15,856,727	57	4,379	52	\$3,621	46

County	Medicaid Spending	Ranking	Number of Enrollees	Ranking	Spending per Enrollee	Ranking
Miller	\$40,580,237	20	13,298	18	\$3,052	67
Mississippi	\$60,411,777	12	18,424	13	\$3,279	61
Monroe	\$14,706,552	61	3,271	64	\$4,496	11
Montgomery	\$8,765,593	73	2,618	71	\$3,348	57
Nevada	\$18,253,758	49	3,114	65	\$5,862	4
Newton	\$8,547,702	74	2,592	72	\$3,298	60
Ouachita	\$31,757,501	28	8,646	26	\$3,673	44
Perry	\$9,533,782	71	2,798	69	\$3,407	55
Phillips	\$45,715,117	18	11,268	20	\$4,057	28
Pike	\$11,680,103	67	3,378	63	\$3,458	52
Poinsett	\$38,364,924	22	9,840	23	\$3,899	36
Polk	\$16,915,706	53	6,244	35	\$2,709	72
Pope	\$58,988,019	13	15,947	15	\$3,699	43
Prairie	\$11,164,861	68	2,577	73	\$4,333	18
Pulaski	\$410,292,305	1	101,811	1	\$4,030	29
Randolph	\$26,190,972	35	5,943	39	\$4,407	14
Saline	\$118,253,796	5	18,470	12	\$6,402	2
Scott	\$11,100,567	69	3,818	56	\$2,907	70
Searcy	\$13,025,798	63	2,824	68	\$4,613	9
Sebastian	\$120,187,502	4	33,205	5	\$3,620	47
Sevier	\$15,219,083	59	5,659	45	\$2,689	73
Sharp	\$22,364,950	44	5,773	43	\$3,874	37
St. Francis	\$39,261,529	21	11,092	21	\$3,540	50

County	Medicaid Spending	Ranking	Number of Enrollees	Ranking	Spending per Enrollee	Ranking
Stone	\$15,448,213	58	3,800	57	\$4,065	27
Union	\$52,091,195	16	14,024	17	\$3,714	42
Van Buren	\$17,203,914	52	4,818	49	\$3,571	48
Washington	\$127,070,681	3	41,053	3	\$3,095	66
White	\$65,951,631	10	19,102	11	\$3,453	54
Woodruff	\$13,183,224	62	2,959	66	\$4,455	12
Yell	\$24,098,910	39	7,211	32	\$3,342	58

Source: Arkansas Department of Human Services, Division of Medical Services; Center estimations

APPENDIX B: DETAILED IMPLAN TABLES

Table 20: Economic Output Impacts of Arkansas Medicaid, 2009

Industry Sector	Direct	Indirect	Induced	Total
Offices of physicians, dentists, and other health practitioners	\$805,852,928	\$1,335,302	\$89,786,488	\$896,974,784
Medical and diagnostic labs and outpatient and other ambulatory care services	\$780,683,520	\$41,287,588	\$23,129,450	\$845,100,544
Private hospitals	\$734,628,096	\$2,757,592	\$88,317,296	\$825,702,976
Nursing and residential care facilities	\$698,366,592	\$0	\$22,178,914	\$720,545,536
Home health care services	\$505,713,280	\$74,999	\$6,449,051	\$512,237,312
Imputed rental activity for owner-occupied dwellings	\$0	\$0	\$216,229,056	\$216,229,056
Real estate establishments	\$0	\$98,137,720	\$66,064,328	\$164,202,048
Other Federal Government enterprises	\$137,216,976	\$615,621	\$1,633,542	\$139,466,128
Wholesale trade businesses	\$0	\$43,046,352	\$68,930,584	\$111,976,936
Food services and drinking places	\$0	\$27,909,178	\$79,255,088	\$107,164,264
Telecommunications	\$0	\$45,667,044	\$45,297,184	\$90,964,224
Monetary authorities and depository credit intermediation activities	\$0	\$24,170,584	\$45,661,104	\$69,831,688
Insurance carriers	\$0	\$29,532,912	\$39,778,104	\$69,311,016
Employment services	\$0	\$48,435,872	\$8,198,681	\$56,634,552
Transit and ground passenger transportation	\$53,845,480	\$636,675	\$742,408	\$55,224,564
Electric power generation, transmission, and distribution	\$0	\$23,388,998	\$29,118,148	\$52,507,144

Industry Sector	Direct	Indirect	Induced	Total
Management of companies and enterprises	\$0	\$41,138,468	\$10,725,183	\$51,863,652
Other state and local government enterprises	\$0	\$11,937,290	\$23,577,070	\$35,514,356
Management, scientific, and technical consulting services	\$0	\$28,729,050	\$5,435,025	\$34,164,076
Securities, commodity contracts, investments, and related activities	\$0	\$8,914,938	\$22,015,126	\$30,930,064
Retail stores - general merchandise	\$0	\$1,134,924	\$28,972,552	\$30,107,476
Legal services	\$0	\$14,747,910	\$14,831,493	\$29,579,404
Transport by truck	\$0	\$10,673,874	\$17,515,918	\$28,189,792
Insurance agencies, brokerages, and related activities	\$0	\$13,043,631	\$15,066,926	\$28,110,556
Services to buildings and dwellings	\$0	\$18,613,932	\$8,373,397	\$26,987,328
Retail stores - motor vehicle and parts	\$0	\$1,568,637	\$25,257,732	\$26,826,368
Retail stores - food and beverage	\$0	\$918,694	\$24,387,370	\$25,306,066
Accounting, tax preparation, bookkeeping, and payroll services	\$0	\$16,291,794	\$6,199,611	\$22,491,404
Automotive repair and maintenance, except car washes	\$0	\$4,550,915	\$15,546,192	\$20,097,108
Retail stores - building material and garden supply	\$0	\$782,564	\$18,581,886	\$19,364,450
Civic, social, professional, and similar organizations	\$0	\$4,853,726	\$11,369,722	\$16,223,448
US postal service	\$0	\$10,532,204	\$5,317,093	\$15,849,297

Industry Sector	Direct	Indirect	Induced	Total
Retail stores - gasoline stations	\$0	\$533,965	\$13,491,727	\$14,025,692
Retail stores - health and personal care	\$0	\$472,254	\$13,259,474	\$13,731,728
Poultry processing	\$0	\$5,183,226	\$7,860,833	\$13,044,058
Radio and television broadcasting	\$0	\$7,241,187	\$5,655,001	\$12,896,187
Maintenance and repair construction of nonresidential structures	\$0	\$7,980,951	\$4,698,911	\$12,679,862
Retail stores - clothing and clothing accessories	\$0	\$423,944	\$12,139,671	\$12,563,615
Individual and family services	\$0	\$0	\$11,970,864	\$11,970,864
Business support services	\$0	\$8,285,737	\$3,607,783	\$11,893,520
Non-depository credit intermediation and related activities	\$0	\$2,775,842	\$8,961,306	\$11,737,148
Commercial and industrial machinery and equipment repair and maintenance	\$0	\$9,123,061	\$2,602,007	\$11,725,069
Funds, trusts, and other financial vehicles	\$0	\$347,123	\$11,306,357	\$11,653,480
Soft drink and ice manufacturing	\$0	\$2,346,689	\$8,985,960	\$11,332,649
Retail non-stores - direct and electronic sales	\$0	\$633,563	\$10,392,985	\$11,026,548
All other miscellaneous professional, scientific, and technical services	\$0	\$7,067,652	\$3,268,746	\$10,336,397
Office administrative services	\$0	\$8,555,090	\$1,423,040	\$9,978,129
All other industries	\$0	\$140,815,359	\$251,762,786	\$392,578,145

Industry Sector	Direct	Indirect	Induced	Total
Total	\$3,716,306,872	\$777,214,631	\$1,455,329,170	\$5,948,850,708

Source: Arkansas Department of Human Services; IMPLAN; Center estimations

Table 21: Employment Impacts of Arkansas Medicaid, 2009

Industry Sector	Direct	Indirect	Induced	Total
Nursing and residential care facilities	17,999.2	0.0	571.6	18,570.9
Home health care services	8,258.2	1.2	105.3	8,364.7
Private hospitals	7,033.9	26.4	845.6	7,905.9
Offices of physicians, dentists, and other health practitioners	6,958.8	11.5	775.3	7,745.7
Medical and diagnostic labs and outpatient and other ambulatory care services	5,850.9	309.4	173.3	6,333.6
Food services and drinking places	0.0	569.6	1,617.6	2,187.3
Employment services	0.0	1,791.2	303.2	2,094.3
Real estate establishments	0.0	1,030.6	693.8	1,724.5
Transit and ground passenger transportation	1,307.0	15.5	18.0	1,340.5
Other Federal Government enterprises	1,097.4	4.9	13.1	1,115.4
Wholesale trade businesses	0.0	255.8	409.7	665.5
Services to buildings and dwellings	0.0	376.8	169.5	546.3
Retail stores - general merchandise	0.0	20.4	521.1	541.5
Retail stores - food and beverage	0.0	15.9	422.9	438.9
Monetary authorities and depository credit intermediation activities	0.0	142.0	268.3	410.4
Retail stores - motor vehicle and parts	0.0	22.7	365.9	388.7
Private household operations	0.0	0.0	377.6	377.6
Civic, social, professional, and similar organizations	0.0	106.4	249.3	355.7
Individual and family services	0.0	0.0	322.5	322.5
Retail stores - miscellaneous	0.0	12.2	270.8	283.0
Retail non-stores - direct and electronic sales	0.0	16.2	266.4	282.7

Industry Sector	Direct	Indirect	Induced	Total
Management, scientific, and technical consulting services	0.0	236.9	44.8	281.7
Automotive repair and maintenance, except car washes	0.0	63.6	217.1	280.7
Accounting, tax preparation, bookkeeping, and payroll services	0.0	200.9	76.4	277.3
Legal services	0.0	134.8	135.6	270.4
Insurance carriers	0.0	114.0	153.6	267.6
Retail stores - building material and garden supply	0.0	10.0	236.5	246.4
Management of companies and enterprises	0.0	195.1	50.9	245.9
Insurance agencies, brokerages, and related activities	0.0	112.9	130.4	243.2
Retail stores - clothing and clothing accessories	0.0	8.0	228.3	236.3
Child day care services	0.0	0.0	225.2	225.2
Transport by truck	0.0	83.0	136.3	219.3
Dry-cleaning and laundry services	0.0	128.6	83.7	212.3
Business support services	0.0	147.4	64.2	211.6
Securities, commodity contracts, investments, and related activities	0.0	57.8	142.8	200.7
Retail stores - health and personal care	0.0	6.4	179.5	185.9
Telecommunications	0.0	92.5	91.8	184.3
US postal service	0.0	119.3	60.2	179.5
Investigation and security services	0.0	122.1	55.0	177.0
Retail stores - gasoline stations	0.0	6.7	169.5	176.2
Other state and local government enterprises	0.0	50.4	99.5	149.9
Maintenance and repair construction of	0.0	89.0	52.4	141.4

Industry Sector	Direct	Indirect	Induced	Total
nonresidential structures				
Private elementary and secondary schools	0.0	0.0	140.9	140.9
Grant-making, giving, and social advocacy organizations	0.0	0.0	139.1	139.1
Retail Stores - Sporting goods, hobby, book and music	0.0	5.6	132.1	137.7
Other private educational services	0.0	1.3	117.2	118.5
Personal care services	0.0	0.0	117.8	117.8
All other industries	0.0	1,070.2	1,944.5	3,014.7
Total	48,505.4	7,785.3	13,986.0	70,276.8

Source: IMPLAN; Center for Business and Economic Research estimates

Table 22: Employee Compensation Impacts of Arkansas Medicaid, 2009

Industry Sector	Direct	Indirect	Induced	Total
Nursing and residential care facilities	\$459,093,184	\$0	\$14,580,006	\$473,673,216
Offices of physicians, dentists, and other health practitioners	\$399,597,376	\$662,135	\$44,522,324	\$444,781,824
Private hospitals	\$330,772,032	\$1,241,627	\$39,765,552	\$371,779,200
Home health care services	\$246,234,576	\$36,518	\$3,140,078	\$249,411,184
Medical and diagnostic labs and outpatient and other ambulatory care services	\$229,815,728	\$12,154,141	\$6,808,792	\$248,778,672
Other Federal Government enterprises	\$115,425,808	\$517,856	\$1,374,122	\$117,317,784
Wholesale trade businesses	\$0	\$15,112,912	\$24,200,470	\$39,313,380
Employment services	\$0	\$28,250,492	\$4,781,926	\$33,032,420
Food services and drinking places	\$0	\$8,279,195	\$23,510,842	\$31,790,038
Management of companies and enterprises	\$0	\$18,234,116	\$4,753,804	\$22,987,918
Transit and ground passenger transportation	\$20,657,250	\$244,254	\$284,817	\$21,186,320
Monetary authorities and depository credit intermediation activities	\$0	\$6,485,602	\$12,252,074	\$18,737,676
Retail stores - motor vehicle and parts	\$0	\$847,356	\$13,643,874	\$14,491,230
Insurance carriers	\$0	\$5,964,791	\$8,034,023	\$13,998,814
Telecommunications	\$0	\$6,875,655	\$6,819,969	\$13,695,623
Real estate establishments	\$0	\$7,745,703	\$5,214,251	\$12,959,953
Retail stores - general merchandise	\$0	\$480,966	\$12,278,193	\$12,759,159

Industry Sector	Direct	Indirect	Induced	Total
US postal service	\$0	\$7,901,594	\$3,989,052	\$11,890,646
Management, scientific, and technical consulting services	\$0	\$9,307,877	\$1,760,885	\$11,068,762
Legal services	\$0	\$5,002,552	\$5,030,903	\$10,033,453
Electric power generation, transmission, and distribution	\$0	\$4,386,292	\$5,460,717	\$9,847,008
Securities, commodity contracts, investments, and related activities	\$0	\$2,801,047	\$6,917,087	\$9,718,134
Insurance agencies, brokerages, and related activities	\$0	\$4,497,440	\$5,195,071	\$9,692,511
Transport by truck	\$0	\$3,392,537	\$5,567,182	\$8,959,720
Retail stores - food and beverage	\$0	\$321,218	\$8,526,942	\$8,848,159
Services to buildings and dwellings	\$0	\$6,080,094	\$2,735,104	\$8,815,198
Civic, social, professional, and similar organizations	\$0	\$2,582,657	\$6,049,805	\$8,632,462
Accounting, tax preparation, bookkeeping, and payroll services	\$0	\$5,929,305	\$2,256,313	\$8,185,617
Other state and local government enterprises	\$0	\$2,424,469	\$4,788,514	\$7,212,983
Retail stores - building material and garden supply	\$0	\$287,580	\$6,828,546	\$7,116,126
Individual and family services	\$0	\$0	\$5,909,518	\$5,909,518
Retail stores - health and personal care	\$0	\$201,940	\$5,669,872	\$5,871,812
Automotive repair and maintenance, except car washes	\$0	\$1,200,249	\$4,100,121	\$5,300,370
Maintenance and repair construction of nonresidential	\$0	\$3,299,984	\$1,942,918	\$5,242,901

Industry Sector	Direct	Indirect	Induced	Total
structures				
Computer systems design services	\$0	\$3,620,636	\$1,510,895	\$5,131,531
Non-depository credit intermediation and related activities	\$0	\$1,082,364	\$3,494,217	\$4,576,580
Office administrative services	\$0	\$3,834,239	\$637,781	\$4,472,021
Business support services	\$0	\$2,932,385	\$1,276,822	\$4,209,207
Grant-making, giving, and social advocacy organizations	\$0	\$771	\$3,900,942	\$3,901,713
Investigation and security services	\$0	\$2,501,945	\$1,126,663	\$3,628,608
Retail stores - clothing and clothing accessories	\$0	\$122,417	\$3,505,406	\$3,627,823
Child day care services	\$0	\$0	\$3,527,561	\$3,527,561
Retail stores - miscellaneous	\$0	\$145,163	\$3,220,547	\$3,365,710
Retail stores - electronics and appliances	\$0	\$187,771	\$3,048,174	\$3,235,945
Warehousing and storage	\$0	\$1,576,343	\$1,566,630	\$3,142,973
Dry-cleaning and laundry services	\$0	\$1,876,332	\$1,220,516	\$3,096,848
Retail stores - gasoline stations	\$0	\$114,670	\$2,897,385	\$3,012,056
All other industries	\$0	\$28,983,800	\$54,763,598	\$83,747,398
Total	\$1,801,595,954	\$219,728,985	\$394,390,799	\$2,415,715,763

Source: IMPLAN; Center for Business and Economic Research estimates